

AGNICO-EAGLE MINES LTD.

Meadowbank Division



Meadowbank Gold Project

Water License Technical Meetings
February 26 – 27, 2008

About The Meadowbank Project

AEM

Mine Life: Construction	2 Years
Mine Operations	10 Years
Mine Throughput:	8,500 tpd
Metallurgical Recovery:	93%
Mining Method:	Open Pit

Mine is on IOL Land – Mineral rights to NTI and Canada	380 permanent jobs
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Average annual production:

Years 1 to 4: 400,000 oz Au

Life of Mine: 350,000 oz Au

Est. Total Cash Cost per oz:

Years 1 to 4: \$230

Life of Mine: \$250

Open Pit Mineral Reserve: 3.5 million oz Au



Presentation Outline



■ **Project Status Update**

- **Project Schedule**
- **Water Compensation Status**
- **Work in Progress at the Site**
- **Transportation of materials to Meadowbank Site**
 - **From Baker Lake**
 - **From Rankin Inlet**
 - **2008 Sea lift Schedule**
- **Construction of the all-weather private access road from Baker Lake**
- **Construction of the Baker Lake Receiving and Storage Facilities**

■ **Project Changes**

- **Explosives Storage and Mixing Facility Location**

■ **Sewage Treatment Facilities at Meadowbank**

■ **Preparation for 2008 Spring Freshet**

■ **Type A Water License Application**

- **Consolidation of Type B Licenses for the Meadowbank Project**

Project Status Update – Key Dates



- **Construction of Camp and Construction Support Facilities – February thru June of 2008**
- **Construction of Additional Fuel Storage Tanks in Baker Lake – Spring 2008**
- **Start construction of East Dike – July 01, 2008**
 - Portage Starter Pit stripping (N&S) – April 2008
 - In-situ preparation of broken rock for East Dike
- **Fish Out – Summer of 2008**
- **Start Dewatering of Northwest Arm of 2PL – October 2008**
- **Construction of Stormwater Dike – Winter of 2008/2009**
- **Construction of Central Dike – Summer 2009**
- **Construction of Bay Zone Dike – Summer 2009**
- **Construction of Goose Island Dike – Summer 2010**
- **Construction of Mill and Maintenance Facilities – start in summer of 2008 continuing through late 2009**
- **Commence Milling – end of 2009 – First Deposition of Tailings**
- **Development of Vault Deposit - 2014**

Water Compensation



- **Water Compensation Agreement with the KIA under Article 20 of the Nunavut Land Claims Agreement reached**
- **Agreement approved by the Board of Directors for the KIA and by AEM**
- **Specific terms are confidential but agreement addresses compensation for water used by the project, water flows altered by the project and provides for monitoring by the KIA through the construction, operation, closure and post closure phases of the Meadowbank Project**

Meadowbank – Summer of 2007

AEM

Second Portage Lake Arm

Westernmost Channel

Third Portage
Lake

Work in Progress at Meadowbank



- **Installation of the permanent accommodation camp, kitchen and temporary offices;**
- **Preparation and installation of the batch concrete plant**
- **Preparation of aggregate from quarried rock for concrete in 2008 summer**
- **Operation of Airstrip Quarry to generate broken rock for building and laydown pads and site roads at the plant site**
- **Set up of construction power generator units**
- **Completion of AWPARG from Baker Lake**

Transportation of Material To Meadowbank Site



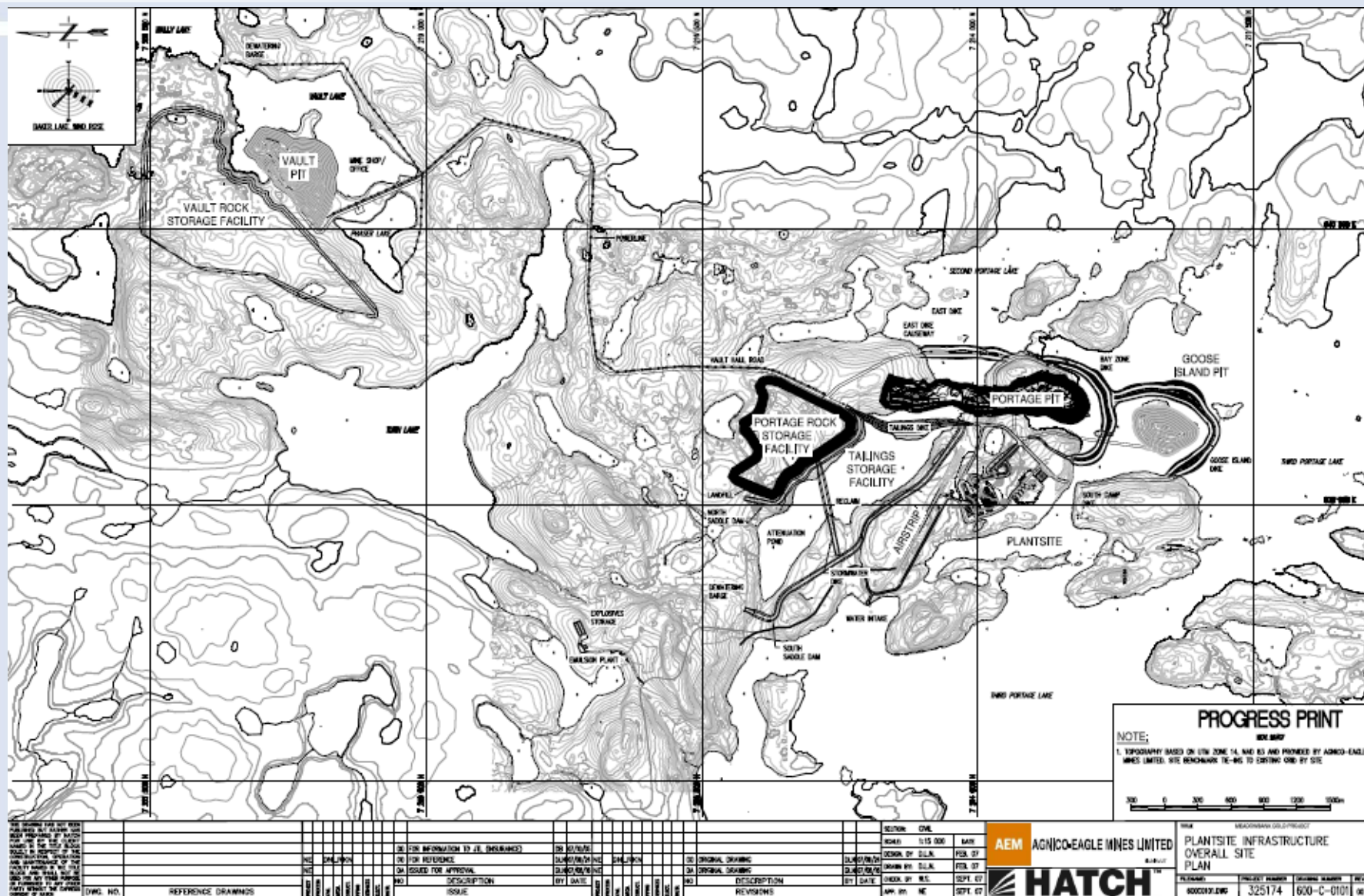
- **Baker Lake – materials are currently being transported from Baker Lake to the Meadowbank site via the AWPAR and an ice road across 3PL**
- **Rankin Inlet – Material that ended up in Rankin Inlet is being transported by air and by cat train overland to the Meadowbank Site**
- **AEM has no fuel in Rankin Inlet – all fuel frozen in barges in Rankin Inlet is under the ownership of NTCL and or their other customers**
- **2008 Sealift Preparations are underway both from Eastern Canada and from Churchill – estimate ~10 voyages involving 18 barges (4 from Eastern Canada with 2 double barges + 6 from Churchill with 6 double barges)**

Project Changes



- **Project Changes – Relocation of planned Explosives Storage & Mixing Facilities**
- **Was located on the access road to the Vault deposit under the NIRB environmental review**
- **Relocated to be located ~500 m off of the all weather access road before arriving at Meadowbank**
- **Located in same drainage**
- **Reasons for Relocation**
 - **Better water supply for year round operation**
 - **Delays required road construction to Vault**
 - **Easier haul of AN to Meadowbank – Deflects traffic away from the main minesite**

Relocation of Explosives Plant



Sewage Treatment at Meadowbank



- **Working with Raymac Environmental and Seprotech of Ottawa to ensure planned sewage treatment facilities at Meadowbank will be adequate;**
- **What Discharge Standards to Use**
 - **Guideline for Industrial Waste Discharges in the NWT – Feb 1998**
 - **Environmental Risk-Based Approaches for Managing Municipal Wastewater Effluent (MWW) prepared for CCME (Table 3.3)**
- **Discharge during operation will be to the tailings impoundment (co-disposal with tailings)**
- **Discharge during construction to Tear Drop Lake (site stormwater management pond). AEM plans to build up this pond to increase storage capacity.**
- **Used CCME guidance for Discharge into Lakes with $T_R < 5$ Yr**
 - **BOD₅ of 80 mg/L**
 - **TSS of 100 mg/L**
 - **F. Coli. Of 10,000 CFU/dL**

STP Discharge Standard During Doris North Construction Phase - NWB



3. The Licensee shall operate the Sewage Treatment Plant in accordance with the following:
 - a. All Sewage and Greywater shall be collected and treated in the Sewage Treatment Plant;
 - b. During the construction phase, all effluent from the Sewage Treatment Plant at monitoring station ST-8 shall not exceed the following effluent quality limits:

Parameter	Maximum Average Concentration (mg/L)	Maximum Allowable Grab Sample Concentration (mg/L)
pH	6-9	9
Total Suspended Solids (TSS)	100	100
BOD ₅	80	80
Fecal Coliforms	10,000 CFU/ 100mL	10,000 CFU/ 100mL
Total Oil and Grease	5 and no visible sheen	10 and no visible sheen

Sewage Treatment at Meadowbank



■ First Phase

- **Installation and retrofit of Seprotech Model Rotary biological contactor purchased from the Voisey Bay Project to provide STP capacity for ~150 persons – due to be complete by third week in March**

■ Second Phase

- **Installation of 65 m³ Equalization Tank ahead of RBC to attenuate peak flow to raise STP capacity to ~300 persons – tank to be flown to Meadowbank and installed in early April**

■ Third Phase

- **Addition of an additional RBC 200 person capacity in parallel or the addition of two 100 person capacity RBC units in parallel to the phase 1 unit to raise STP capacity to ~500 persons – will arrive in summer 2008 sealift and be installed in August.**

Sewage Treatment During Construction Phase



- **Overflow from final RBC Clarification tank to be transferred by lift station for discharge into Tear Drop Lake (stormwater management pond). During summer months the effluent will be land applied at a point ~30 m upstream of Tear Drop Lake.**

- **AEM plans to increase capacity in the stormwater management pond by building up the pond. Excess water from stormwater management pond will be pumped to the Northwest arm of Second Portage Lake assuming it meets acceptable standards. Intent is to maximize retention time in stormwater pond**

- **Sludge from the primary settling tank will be drained off the bottom of the tank and pumped to a plate press filter for dewatering.**
 - **Filtrate returned to feed end of STP**
 - **Sludge incinerated in the site incinerator**

Preparation for 2008 Spring Freshet



- **Use of stormwater management pond**
- **Snow Removal**
- **Silt Fences + Geotextile filters + Silt Curtains**

- **Assumed WL Std for TSS for runoff from construction – based on previous WL's issued by NWB**

19. All surface runoff during the construction of any facilities, where flow may directly or indirectly enter a water body, shall meet the following effluent quality limits:

Parameter	Maximum Average Concentration (mg/L)	Maximum Concentration of Any Grab Sample (mg/L)
Total Suspended Solids	50.0	100.0

Type A Water License Application



- **AEM currently has Type B Water Licenses for the following:**
 - **Baker Lake Marshalling Facilities**
 - **All Weather Private Access Road**
 - **Exploration and the Exploration Camp at Meadowbank**

- **AEM has requested that through this process these Type B WL be consolidated into one Type A License covering construction, operation and closure of the Meadowbank Mine Project and a Type B WL covering regional exploration based out of a new camp at Km 100 on the AWPAP**

Spill Contingency Plans



AEM & its contractors have submitted the following spill contingency plans to the NWB and/or the GN DoE

- 1. Spill Contingency Plan for the Meadowbank Project – Doc 487 of the Type A WL Application dated August 2007 and Emergency Response Plan for the Meadowbank Project – Doc 482 also dated Aug 2007**
- 2. Spill Contingency Plan – Baker Lake Facilities submitted by AEM in October of 2007 to the NWB under WL 8BC-MEA0709**
- 3. NTCL Baker Lake Contingency Plan December 2006 (Revised January 2007)**
- 4. NUNA M&T Services - Environmental Procedures Manual for the Tahek Lake Access Road Project 2006-2007**
- 5. Spill Contingency Plan – Meadowbank Regional Exploration Camp submitted by AEM in October of 2007 to the NWB as part of renewal application for WL 2BE-MEA0507**
- 6. Spill Contingency Plan – Exploration Camp KM 100 submitted by AEM to the NWB in December of 2007 in support of an application for a new Type B WL (subsequently withdrawn and re-submitted on Feb 01, 2008 as application to amend WL 2BB-MEA0507.**

Closure and Reclamation Plans



AEM has submitted the following closure and reclamation plans to the NWB

- 1. Preliminary Mine Closure and Reclamation Plan for the Meadowbank Project – Doc 511 of the Type A WL Application dated August 2007**
- 2. Abandonment and Restoration Plan – Baker Lake Facilities submitted by AEM in October of 2007 to the NWB under WL 8BC-MEA0709**
- 3. Abandonment and Restoration Plan – Meadowbank Regional Exploration Camp submitted by AEM in October of 2007 to the NWB as part of renewal application for WL 2BE-MEA0507**
- 4. Abandonment and Restoration Plan – Exploration Camp KM 100 submitted by AEM to the NWB in December of 2007 in support of an application for a new Type B WL (subsequently withdrawn and re-submitted on Feb 01, 2008 as application to amend WL 2BB-MEA0507.**

AEM Objectives for this Technical Meeting



- **Consensus on the AEM/Golder proposed design for the East and Bay Zone Dewatering dikes and the stormwater management dike**
- **Consensus on the proposed approach to stage within the Type A Water License the submission and NWB approval for the Goose Island dewatering dike (suggest setting a 6 month minimum time requirement);**
- **Consensus on the proposed approach to stage within the Type A Water License the submission and approval of the design for the water diversions systems associated with the Vault open pit;**
- **Consensus on the proposed discharge standards for effluent to be discharged into Third Portage Lake through the diffuser; and**
- **Consensus on the proposed discharge standards for the STP during the construction & operational phase.**



Road to Meadowbank



Thank You From Nunavut

AEM

